

## CLAIMS

1 - Planar antenna realised on a substrate (2) comprising a slot (1) of closed shape dimensioned to operate at a given frequency in a short-circuit plane of at least one feed-line (3, 4), characterized in that the  
 5 perimeter of the slot is selected such that  $p = k\lambda_s$  where  $k$  is an integer greater than 1 and  $\lambda_s$  the guided wavelength in the slot and in that it comprises at least a first feed-line (3) placed in an open circuit zone of the slot and a second feed-line (4) placed at a distance  $d = (2n+1)\lambda_s/4$  from the  
 10 first line, where  $n$  is an integer greater than or equal to zero.

2 - Antenna according to claim 1, characterized in that each feed-line terminates in an open circuit and is coupled to the slot according to a line/slot coupling such that the length of the line after the transition equals  
 15  $(2k'+1)\lambda_m/4$  where  $\lambda_m$  is the guided wavelength under the line and  $k'$  a positive or null integer.

3 - Antenna according to claim 1, characterized in that each feed-line is coupled to the slot according to a line/slot coupling with a microstrip  
 20 line terminated by a short-circuit located at  $(2k'+1)\lambda_m/4$  where  $\lambda_m$  is the guided wavelength under the line and  $k'$  a positive or null integer.

4 - Antenna according to claim 1, characterized in that each feed-line is coupled magnetically to the slot according to a tangential line/slot  
 25 transition.

5 - Antenna according to one of claims 1 to 3, characterized in that the feed-lines are realised in microstrip technology, coplanar technology or by a coaxial cable.

6 – Antenna according to any one of the above claims, characterized in that the shape of the slot is annular (1), square (40), rectangular (10, 20), polygonal (30), in a clover leaf form (50).

5                    7 – Antenna according to claim 6, characterized in that for a slot of rectangular shape (20), the feed-lines (21, 22) are equidistant from an axis of symmetry ( $x$ ,  $x'$ ) of the slot.

10                   8 – Antenna according to claim 6, characterized in that for a slot of rectangular shape (20), one of the feed-lines (21, 22) is positioned according to an axis of symmetry ( $x$ ,  $x'$ ) of the slot.

15                   9 – Antenna according to any one of the above claims, characterized in that it is connected to a transmission/reception means enabling a diversity of reception.